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Higher Tobacco Taxes Can Improve Health And Raise Revenue

By Chuck Marr and Chye-Ching Huang¹

The President's proposal to raise the federal excise tax on tobacco products and use the additional revenue to expand preschool education, which he included in both his fiscal year 2014 and 2015 budgets, could achieve the dual goals of reducing the number of premature deaths due to smoking and raising an estimated \$78 billion over ten years to finance early childhood education.

Tobacco taxes are a proven strategy to reduce smoking, particularly among teenagers and low-income people. Given the high health costs of tobacco use, reducing smoking rates would lead to substantial health gains. Moreover, youth and lower-income people would benefit disproportionately from improved health, partially offsetting the regressivity of tobacco taxes, and lower-income children and families would be the primary beneficiaries of the expanded availability of early childhood education that these tax revenues would finance.

Smoking Causes One in Five Deaths in the United States

Cigarette smoking is the leading cause of preventable disease in the United States. According to the Centers for Disease Control and Prevention, it accounts for about 443,000 deaths each year, or about 20 percent of all deaths.² (Some 50,000 of these premature deaths are from secondhand smoke.) The Surgeon General estimates that approximately *half* of today's 44.8 million smokers will die prematurely from smoking-related diseases.³

- Smokers are two to four times more likely than nonsmokers to develop coronary heart disease. Even low levels of tobacco exposure, including occasional smoking or secondhand smoke, increase the risk of poor cardiac health.⁴

¹ Krista Ruffini co-authored the original version of this paper.

² U.S. Surgeon General, "Preventing Tobacco Use Among Youth and Young Adults," 2012, <http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/full-report.pdf>; Centers for Disease Control and Prevention (CDC), "Health Effects of Cigarette Smoking," 2012, http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm.

³ Surgeon General, 2012.

⁴ U.S. Surgeon General, "How Tobacco Smoke Causes Disease," 2010, <http://www.surgeongeneral.gov/library/reports/tobaccosmoke/executivesummary.pdf>; CDC, 2012.

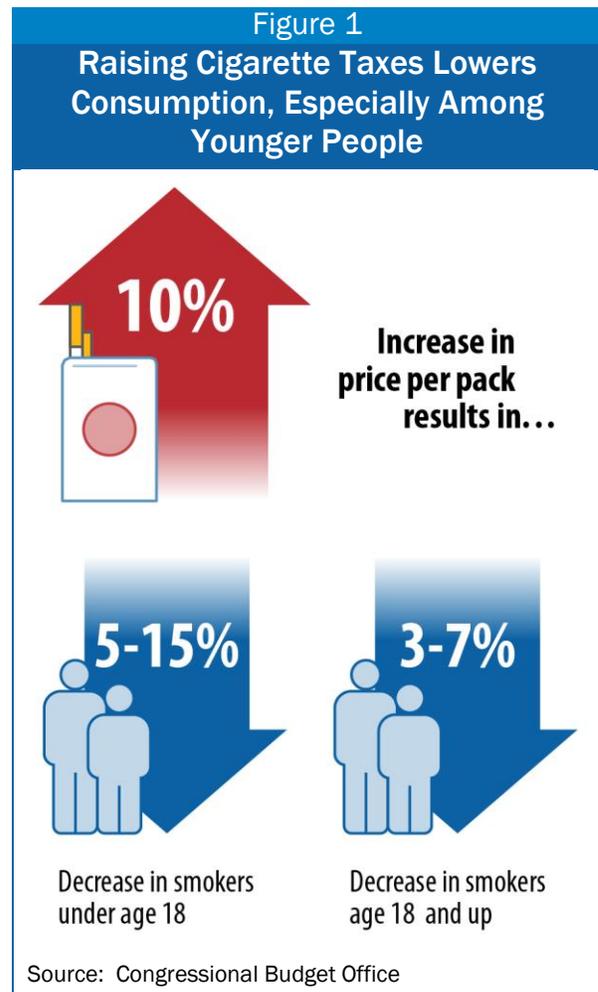
- Male smokers are 23 times more likely, and female smokers are 13 times more likely, than nonsmokers to develop lung cancer. Smoking causes 80-90 percent of deaths from lung cancer.⁵
- Smoking doubles the risk of stroke.⁶
- Smoking during pregnancy increases the risk of pregnancy complications, premature birth, low-birth weight infants, stillbirth, and Sudden Infant Death Syndrome (SIDS).⁷

On average, a lifetime smoker will die about seven years before a non-smoker with similar characteristics, such as education level, income, and sex.

Tobacco Taxes Are a Proven Strategy to Reduce Smoking and Extend Lives

Extensive research shows that tobacco taxes reduce smoking and extend lives. An examination of more than 100 international studies articulates the empirical consensus: “Significant increases in tobacco taxes are a highly effective tobacco control strategy and lead to significant improvements in public health.”⁸

Smoking is a habit that tends to start early in life. Four in five adult smokers started before they were 18; only one in 100 started after age 26. A primary reason that cigarette taxes are so effective is that young people are particularly sensitive to price increases. The Congressional Budget Office (CBO) summarizes the existing research and concludes that a 10 percent increase in cigarette prices will lead people under age 18 to reduce their smoking by 5-15 percent. Among adults over 18, CBO concludes, the decline would be 3-7 percent (see Figure 1). Taking the mid-point of the estimate for youth suggests that each 1 percent price increase leads to roughly a 1 percent decrease in youth tobacco consumption. (Approximately half of the decline in smoking is due to fewer



⁵ CDC, 2012.

⁶ CDC, “Health Effects: Heart Disease and Stroke,” 2012, http://www.cdc.gov/tobacco/basic_information/health_effects/heart_disease/index.htm.

⁷ CDC, “Smoking During Pregnancy,” 2009, http://www.cdc.gov/tobacco/basic_information/health_effects/pregnancy/index.htm.

⁸ Frank J. Chaloupka, Ayda Yurekli, and Geoffrey T. Fong, “Tobacco Taxes as a Tobacco Control Strategy,” *Tobacco Control*, 2012, 21 pp. 172-180, <http://tobaccocontrol.bmj.com/content/21/2/172.full>.

smokers (people either quitting or not starting to smoke), while the other half is due to fewer cigarettes consumed by people who smoke.)

The President proposes raising the federal cigarette tax from \$1.01 to \$1.95 per pack in 2015 and indexing it for inflation thereafter. CBO has estimated that a \$1-per-pack increase, which is similar to what the President has proposed, would result by 2021 in *8 percent fewer smokers aged 18-24*, compared to current law. This implies that among 18-24 year olds who will be smokers if the tax is *not* raised, 4 percent fewer will die prematurely from smoking-related diseases if the President's proposal *is* enacted.⁹

CBO also estimates that there would be 2.6 million fewer adult smokers over age 18 in 2021 as a result of a \$1-per-pack increase, or 6 percent less than under current law.¹⁰

Such outcomes would represent a major health policy achievement, enabling millions of Americans to live longer, healthier, and more productive lives.

Impact of Tobacco Tax Is Less Regressive Than Many Believe

Some opponents note that a tobacco tax increase would be regressive. They point out that low-income people have higher smoking rates: 29 percent of poor adults smoke, compared to 18 percent of non-poor adults.¹¹ Also, expenditures for cigarettes account for a greater share of lower-income households' budgets.

If tobacco only harmed smokers, and if people were fully aware of its health costs, the rationale for tobacco taxes would be less powerful. However, several considerations support taxation as a mechanism to reduce tobacco use. First, its numerous health risks impose costs on non-smokers as well as smokers, both because they raise overall U.S. health care spending¹² and because even secondhand exposure to cigarette smoke raises the risk of cardiac disease.¹³ In addition, evidence suggests that people do not fully account for the health risks of smoking and that many smokers would like to quit.¹⁴

⁹ CBO's considered only how a higher cigarette tax would affect the *number* of smokers. Its analysis did not model health and budgetary effects from smokers consuming fewer cigarettes. Therefore, CBO's projected health gains are likely a lower bound on overall health gains.

¹⁰ Under current law, CBO projects that the fraction of adults who smoke will decrease from 19 percent to 16 percent by 2021. Incorporating population growth projections, 16 percent of all adults in 2021 corresponds to 43 million adult smokers.

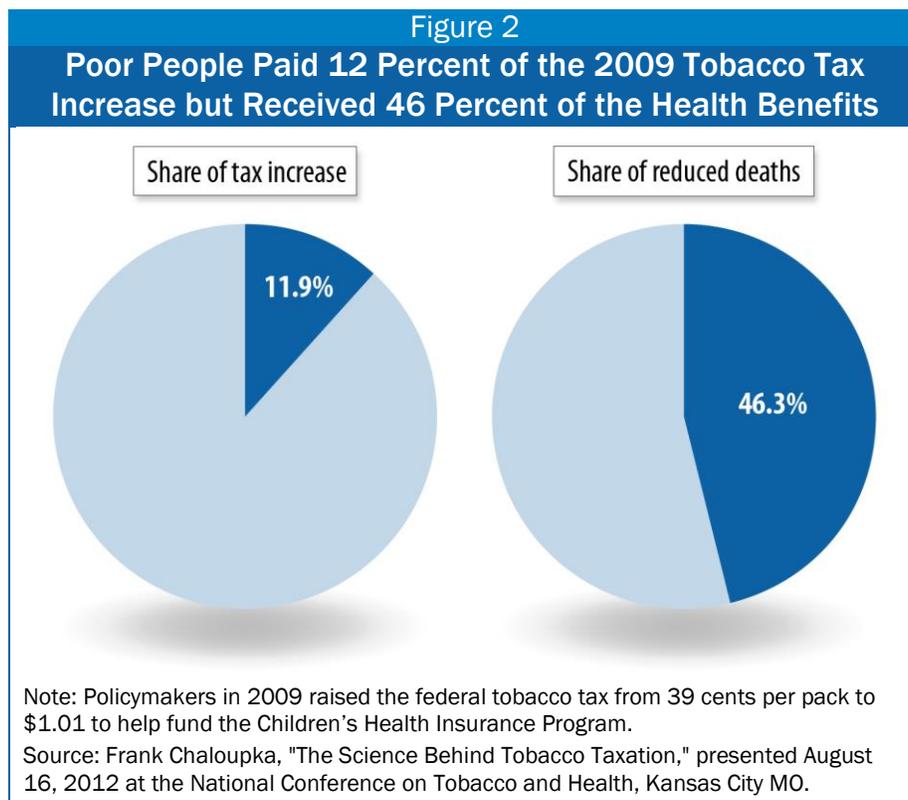
¹¹ CDC, "Current Cigarette Smoking Among Adults," 2012, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6144a2.htm?s_cid=%20mm6144a2.htm_w.

¹² CBO, "Raising the Excise Tax on Cigarettes: Effects on Health and the Federal Budget," June 2012, http://www.cbo.gov/sites/default/files/cbofiles/attachments/06-13-Smoking_Reduction.pdf; Brian S. Armour, Eric A. Finkelstein, IC Fiebelkorn, "State-level Medicaid expenditures attributable to smoking," *Preventing Chronic Disease* 2009;6(3):A84, http://www.cdc.gov/pcd/issues/2009/jul/08_0153.htm.

¹³ U.S. Surgeon General, 2010; CDC, "Health Effects of Cigarette Smoking," 2012, http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/.

¹⁴ Jonathan Gruber and Jonathan Zinman, "Youth Smoking in the United States: Evidence and Implications," in *Risky Behavior Among Youths: An Economic Analysis*, ed. Jonathan Gruber, January 2001 pp. 69-120, <http://www.nber.org/chapters/c10687.pdf>; ND Weinstein, SE Marcus, and RP Moser, "Smokers' Unrealistic Optimism About Their Risk," *Tobacco Control*, 2005, pp. 55-59, <http://tobaccocontrol.bmj.com/content/14/1/55.full.pdf>.

Policymakers should therefore balance understandable concerns about regressivity with the following facts:



- **The health benefits of a higher tobacco tax are progressive.** CBO has found that lower-income people are “more responsive to price increases than higher income people are.”¹⁵ Other studies agree. One leading study estimates that people with incomes below the median reduce their cigarette consumption by four times more than people with incomes above the median in response to cigarette price increases.¹⁶

Because low-income people are more sensitive to changes in tobacco prices, they will be more likely than high-income people to smoke less, quit, or never start in response to a tax increase. This means that the health benefits of the tax increase would be progressive. One forthcoming study concludes that people below the poverty line paid 11.9 percent of the tobacco tax increase enacted in 2009 but will receive 46.3 percent of the resulting health benefits, as measured by reduced deaths (see Figure 2).¹⁷

- **The tax provides a helpful self-control device.** Smoking tends to provide smokers with instant gratification but at the risk of long-term harm. A typical smoker says that he would like

¹⁵ CBO, 2012.

¹⁶ Matthew C. Farrelly *et al.*, “Response by Adults to Increases in Cigarette Prices by Sociodemographic Characteristics,” *Southern Economic Journal*, 2001 68(1): 156-165.

¹⁷ Chaloupka, in progress.

to smoke fewer cigarettes tomorrow than today;¹⁸ the problem, in effect, is that tomorrow may never come. For example, more than 70 percent of smokers aged 18-65 who say they will not be smoking in five years are still smoking when that time comes.¹⁹

In this respect, decisions about smoking are similar to those about retirement saving. People want to save but it is hard because spending provides instant gratification; mechanisms such as automatic deductions from people's paychecks can help people avoid the spending temptation. Similarly, the tobacco tax reduces the instant gratification of smoking and leads some smokers to put more weight on its long-term risks.

If smokers were completely unresponsive to price changes, tobacco taxes would not be a helpful self-control mechanism. But studies have concluded that smokers, especially lower-income smokers, *do* reduce their consumption when prices increase. Therefore, this self-control function does benefit lower-income groups more.²⁰

- **Where the money goes is important.** Expanding early childhood education — in particular for low- and moderate-income children — as the President has proposed is a very progressive use of the revenue from raising the tobacco tax. The combined policy is designed to benefit people both at the “front end,” by expanding opportunity, and at the “back end,” by improving health and extending lives.

These three factors can help mitigate the reduced enjoyment from smoking that some low-income people facing an increased tobacco tax might experience. It is also worth noting that on average low-income smokers tend to respond to tobacco tax increases by reducing their consumption of cigarettes, rather than by spending more on cigarettes and reducing their consumption of other goods. One study found that, on average, the lowest-income quintile reduces cigarette consumption by 1 percent for every 1 percent price increase.²¹ This implies that when prices rise, this group would spend the same total amount for fewer cigarettes (rather than spend more on the same number of cigarettes). Obviously, not all members of the group respond in the same way. But to the extent that a person curbs his or her consumption or stops smoking altogether, his or her cash burden is smaller than it would be if he or she continued to smoke at the same level after the tax is imposed.

Decline in Tobacco Revenue Over Time Would Signal Policy's Success

The ultimate goal of raising cigarette taxes is to improve public health and extend lives. If tobacco revenues decline over time because fewer people are smoking, this would indicate that the policy is working.

Some have used the likely decline in tobacco revenues to argue against using them to finance preschool education. For example, a tobacco industry representative said: “With cigarette sales

¹⁸ CDC, “Quitting Smoking Among Adults—United States, 2001-2010,” *Mortality and Morbidity Weekly Report*, Vol. 60, No. 44, November 11, 2011, http://www.cdc.gov/tobacco/data_statistics/mmrws/byyear/2011/mm6044a2/intro.htm.

¹⁹ U.S. Surgeon General, 2012.

²⁰ Jonathan Gruber and Botond Koeszegi, “A Theory of Government Regulation of Addictive Bads,” *Journal of Public Economics*, 2004, 88(9–10), 1959–1987.

²¹ Gruber and Koeszegi, 2004.

declining year to year, the stability of this funding source is unreliable and therefore will likely not produce the \$78 billion the President needs to fund the preschool education program over the next decade.”²²

However, the President’s proposal takes into account this positive behavioral response and assumes that revenue falls at the end of the ten-year budget window.²³ Even so, the estimated revenue is sufficient to pay for the proposal over ten years.

Tobacco revenues are expected to continue falling beyond the budget window. This, too, would represent a policy success and a public health gain. Policymakers can revisit the financing mechanisms toward the end of the ten-year period. They could elect to raise the tobacco tax further at that time (particularly given that incomes will likely be higher and, therefore, the cost of cigarettes per hour of work lower). Or, policymakers may prefer to add another financing source. But they should not let the projected decline in tobacco revenues tip the balance against a policy that will improve public health and extend lives, while helping to finance an important national need and thereby make a sound investment in the future workforce.

²² “NATO Responds in News Release to President’s Tobacco Tax Increase Proposal,” National Association of Tobacco Outlets, Inc., April 10, 2013, <http://www.natocentral.org/?p=2899>.

²³ Office of Management and Budget, “Effect of Budget Proposals on Projected Deficits, Table S-2” <http://www.whitehouse.gov/sites/default/files/omb/budget/fy2015/assets/tables.pdf>.